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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,660	12/01/2004	Kesafumi Matsumoto	F-8374	8780
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EXAMINER				
AMRANY, ADI				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/516,660

Applicant(s)

MATSUMOTO, KESAFUMI

Examiner

ADI AMRANY

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,13,14,16,18-21,25,30,37,38,40 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,13,14,16,18-21,25,30,37,38,40 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/22/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 22, 2008 have been fully considered but they are not persuasive. As admitted by applicant, the newly added limitation regarding the resistor elements (claim 1, lines 21-35) is "the same composition" as that already claimed by the applicant in US 7,218,201 (Remarks, page 20, lines 5-6). Lines 21-25, with the exception of the word "with," (line 28) are repeated word-for-word in claim 1 of the '201 patent.

Regarding paragraphs a-d and f-h, (Remarks, pages 15-19), the "distinctive features" described corresponds to the high-voltage resistor element of applicant's '201 patent.

Regarding paragraph e (Remarks, page 17), it is noted that none of the claims recite using the load system in a vehicle.

Drawings

2. New figures 5-6 and 15-25 were received on January 22, 2008. These drawings are acceptable and will be entered.

3. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

The Non-Final Rejection (July 30, 2007) contained a drawing objection because applicant has not furnished a drawing showing the completed structure of at least claim

1, specifically showing the low-voltage bank parallel to the high-voltage bank, each bank comprised of a plurality of lower-capacity configuration banks for a low- or high-voltage resistor circuit.

Applicant has not responded to this objection or submitted a new figure showing the completed structure of the pending claims of the present application.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 6, 13-14, 16, 18-21, 25, 30, 37-38, 40 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7,218,201 in view of Kondo (EP 1,156,342).

With respect to claim 1, the '201 patent (claim 1) recites the limitations of the resistor element (lines 21-35) word-for-word (except for "with", line 28). Kondo discloses a dry-type high-voltage load system apparatus (par 33) having a high-voltage load system circuit comprising:

a low-voltage bank (fig 24, item SWai; par 67) comprised of a plurality of lower-capacity configuration banks (items SWai1-SWai8) for low voltage resistor circuits each comprised of a plurality of low-voltage three-phase resistor circuits (fig 14, items Ri, Si, Ti; par 63) connected to each of a plurality of switches (fig 24, items S1-S8), connected in parallel to an output terminal of a transformer (coil 80; par 22, 77) connected to a central breaker (item 97); and

a high-voltage bank (fig 24, item SWbi) comprised of a plurality of lower-capacity configuration banks for high-voltage resistor circuits each comprised of a plurality of high-voltage three-phase resistor circuits connected to each of a plurality of switches;

said low-voltage bank and said high-voltage bank being connected in parallel (fig 24; par 67) to a high-voltage power generator (item 96) through said central breaker;

said low-voltage three-phase resistor circuit and said high-voltage three-phase resistor circuit each being comprised of resistor arrays in three phases (fig 14; par 63), each of said resistor arrays being comprised of resistor elements connected in series, in a form of a Y-connection in which three resistor arrays are concentrated for reconciliation of their phases so that an isolated and independent neutral point unconnected to those of the other three-phase resistor circuits is formed, or in a form of a Δ -connection in which each terminal of said resistor arrays in three phases is connected to each of in-phase branch distribution lines of a power cable (fig 27, 33; par 107).

Kondo further discloses the structure of the resistor elements, as stated in the non-final rejection. The said resistor elements (figs 9-9B; par 42-46) comprise a cylindrical outer tube (59), a resistive heat-generating wire (63), an insulating material (item 64), and high-voltage proof insulating sleeves (item 66).

Kondo does not expressly disclose that the plurality of switches of the low-voltage bank is connected in parallel to the output terminal of a transformer. Kondo

does disclose that the switches are connected to coils (80). One skilled in the art would recognize that coils contain the same magnetic properties as the output windings of a transformer, since both are constructed of a wound conductor. Further, it would be obvious to one skilled in the art to join the separate coils into one, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

'201 and Kondo are analogous because they are from the same field of endeavor, namely resistor elements. At the time of the invention by applicant, it would have been obvious to combine the high-voltage resistor disclosed in '201 with the high-voltage load system disclosed in Kondo in order to select resistors that are compact and can handle high voltages (Kondo, par 21-30).

With respect to claim 6, it would be obvious to one skilled in the art to configure the low-voltage resistor circuit in a Δ -connection, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Y- and Δ -connections are the most common three-phase connection configurations, and it would be obvious to one skilled in the art to place any combination of the two connections into the high- and low-voltage resistor circuits to achieve the optimum result.

With respect to claims 13-14, Kondo discloses sixteen resistor elements in a Y-connection (fig 27; par 76) and that the high-voltage circuit is designed to carry 6,600 V (par 88). It would be obvious to one skilled in the art to configure the Kondo resistor

array (fig 27) with either ten or sixteen resistor elements in a Y- or Δ -connection since discovering an optimum value of a result effective variable involves only routine skill in the art. *Id.*

With respect to claims 16 and 18, it would be obvious to one skill in the art to configure the Kondo resistor circuits with a capacity of around 50.1kW or 83.52kW, since discovering an optimum value of a result effective variable involves only routine skill in the art. *Id.*

With respect to claims 19-21, it would be obvious to one skilled in the art to configure the Kondo configuration banks for each of the recited capacities, since discovering an optimum value of a result effective variable involves only routine skill in the art. *Id.* Further, it would be obvious to one skilled in the art to provide a plurality of lower-capacity configuration banks, since it has been held that the mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (CCPA 1977).

With respect to claim 25, Kondo discloses the apparatus is designed to test a load (abstract). Kondo disclose that the generator provides voltage and current to the resistor elements (par 78-79). First, it is inherent that a wattmeter is simply a combination of a voltmeter and an ammeter ($P = V * I$). Second, since Kondo discloses providing specific voltage and current values to the resistor elements and that the electric conduction control circuit (84) can detect when it is necessarily to engage the cooling fan (50), it would be obvious to one skilled in the art that the Kondo apparatus includes a voltmeter and an ammeter.

With respect to claim 30, the '201 patent and Kondo disclose the apparatus necessary to complete the recited method, as discussed above in the rejection of claim 1. The extra method step of preventing the arc discharge is interpreted as an inherent result of the configuration disclosed in claim 30. Support for this interpretation is found in the specification (page 30, line 30 to page 31, line 4). Applicant discloses that the configuration of resistor elements suppresses arc discharges and chain breaking. Since resistors are passive devices, and are not active, the suppression is an inherent result of the circuit configuration.

With respect to claims 37-38, 40 and 42, Kondo discloses the apparatus necessary to complete the recited limitations, as discussed above in the rejections of claims 13-14, 16 and 18, respectively.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADI AMRANY whose telephone number is (571)272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

AA